

What is claimed is:

1. An IP router including an IP(Internet Protocol) routing table which stores routing information for connecting a plurality of client devices with an original server which is at least an origin of supplying a content  
5 and with a plurality of mirror servers into which the content supplied from the original server is copied, the IP router comprising:

means for ending a connection relating to a packet output from a specific port of the client device and  
10 obtaining request information of a content requested by the client device;

means for selecting an optimum server for the request information based on information which is to be an index for selecting an optimum server if the obtained request  
15 information corresponds to the plurality of mirror servers, and based on the routing information;

means for obtaining the content by connecting with the optimum server selected; and

means for transferring the obtained content to the  
20 client device.

2. The IP router, as claimed in claim 1, further comprising:

means for detecting that, from a change in contents of the IP routing table, a network topology has been

5 changed;

means for altering a selection criteria of the optimum server based on a result of detecting that the network topology has been changed; and

10 means for altering a band setting for each service class corresponding to a traffic change accompanying an alteration of the selection criteria.

3. The IP router, as claimed in claim 1, wherein the information to be an index for selecting the optimum server is at least one of: information for driving/stopping state per server, RTT(Round-Trip Time) information, or throughput  
5 information.

4. The IP router, as claimed in claim 1, wherein the means for selecting an optimum server selects the optimum server by additionally considering a past access track record.

5. The IP router, as claimed in claim 1, wherein a health check for obtaining information, per server, which is to be an index for selecting the optimum server is performed when a change in contents of the IP routing table  
5 is recognized.

6. The IP router, as claimed in claim 2, further comprising means for monitoring a changing situation of the traffic for a predetermined certain period of time, wherein the means for altering the band setting alters the

5 band setting for each service class by using a result of monitoring the changing situation of the traffic, performed by the means, as a trigger.

7. A communication system comprising:

a plurality of client devices;

an original server which at least serves as an origin of supplying a content;

5 a plurality of mirror servers which copy and hold the content supplied from the original server; and

an IP(Internet Protocol) router for connecting the plurality of client devices with the original server and the plurality of mirror servers over a network; wherein

10 the IP router includes an IP(Internet Protocol) routing table for storing routing information, and comprises:

means for ending a connection relating to a packet output from a specific port of the client device, and

15 obtaining request information of a content requested by the client device;

means for selecting an optimum server for the request information based on information which is to be an index for selecting an optimum server if the obtained request

20 information corresponds to the plurality of mirror servers, and based on the routing information; and

means for obtaining the content by connecting with

the optimum server selected.

8. The communication system, as claimed in claim 7, further comprising:

means for transferring the obtained content to the client device;

5 means for detecting that, from a change in contents of the IP routing table, a network topology has been changed;

means for altering a selection criteria of the optimum server based on a result of detecting that the  
10 network topology has been changed; and

means for altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.

9. The communication system, as claimed in claim 7, wherein the information to be an index for selecting an optimum server is at least one of: information for driving/stopping state per server, RTT(Round-Trip Time)  
5 information, or throughput information.

10. The communication system, as claimed in claim 7, wherein the means for selecting an optimum server selects the optimum server by additionally considering a historical access track record.

11. The communication system, as claimed in claim 7, wherein a health check for obtaining information, per

server, which is to be an index for selecting the optimum  
server is performed when a change in the IP routing table  
5 is recognized.

12. The communication system, as claimed in claim 7,  
further comprising means for monitoring a changing  
situation of the traffic for a predetermined certain period  
of time, wherein  
5 the means for altering the band setting alters the  
band setting for each service class according to a result  
of monitoring the changing situation of the traffic,  
performed by the means.

13. A band setting method of an IP router for setting  
a band when connecting a plurality of client devices with  
an original server which at least serves as an origin of  
supplying a content and with a plurality of mirror servers  
5 which copy and hold the content over a network based on  
routing information of a routing table provided in an  
IP(Internet Protocol) router, the band setting method  
comprising the steps of:

ending a connection relating to a packet output from  
10 a specific port of the client device, and obtaining request  
information of a content requested by the client device;

selecting an optimum server for the request  
information based on information which is to be an index  
for selecting an optimum server if the obtained request

15 information corresponds to the plurality of mirror servers,  
and based on the routing information;

obtaining the content by connecting with the optimum  
server selected;

transferring the obtained content to the client  
20 device;

detecting, from a change in contents of the IP  
routing table, that a network topology has been changed;

altering a selection criteria of the optimum server  
based on a result of detecting that the network topology  
25 has been changed; and

altering a band setting for each service class  
according to a traffic change accompanying an alteration of  
the selection criteria.

14. The band setting method, as claimed in claim 13,  
wherein the information to be an index for selecting an  
optimum server is at least one of: information for  
driving/stopping state per server, RTT(Round-Trip Time)  
5 information, or throughput information.

15. The band setting method, as claimed in claim 13,  
wherein a process of the step for selecting an optimum  
server is the process of selecting the optimum server by  
additionally considering a historical access track record.

16. The band setting method, as claimed in claim 13,  
wherein a health check for obtaining information, per

server, which is to be an index for selecting the optimum server is performed when a change in the IP routing table  
5 is recognized.

17. The band setting method, as claimed in claim 13, further comprising step for monitoring a changing situation of the traffic for a predetermined certain period of time, wherein

5 the step for altering the band setting alters the band setting for each service class according to a result of monitoring the changing situation of the traffic, performed by the step.

18. A program for setting a band by an IP(Internet Protocol) router which sets a band when connecting a plurality of client devices with an original server which is at least an origin of supplying a content and with a  
5 plurality of mirror servers which copy and hold the content over a network based on routing information of a routing table provided in an IP(Internet Protocol) router, the program is a program as an electric signal for causing an computer of the IP router to execute:

10 a process of ending a connection relating to a packet output from a specific port of the client device, and obtaining request information of a content requested by the client device;

a process of selecting an optimum server for the

15 request information based on information which is to be an index for selecting an optimum server if the obtained request information corresponds to the plurality of mirror servers, and based on the routing information;

a process of obtaining the content by connecting with  
20 the selected optimum server; and

a process of transferring the obtained content to the client device.

19. The program, as claimed in claim 18, as an electric signal for applying, and causing the computer of the IP router to execute:

a process of detecting, from a change in contents of  
5 the IP routing table, that a network topology has been changed;

a process of altering a selection criteria of the optimum server based on a result of detecting that the network topology has been changed; and

10 a process of altering a band setting for each service class according to a traffic change accompanying an alteration of the selection criteria.